REMARKS

This amendment is in response to the Office Action mailed September 2, 2003.

The objections and rejections raised in Par. 1-4 of the Office Action have been obviated by amendments to the Specification and Claims. Reconsideration and withdrawal of same is requested.

The requirement relating to Nucleotide sequence disclosures has been obviated by broadening the claims to biological probes and target samples and by deletion of the Table I at page 19 listing the nucleotide sequences. Reconsideration and withdrawal of this requirement is requested.

The rejection of claims 21-25 under 35 USC 102(b) as anticipated by Walt(a), the rejection of claims 1-18 under 35 USC 103(a) as being unpatentable over Walt(a) in view of Seul, the rejection of claim 19 under 35 USC 103(a) as being unpatentable over Walt(a), Seul and Walt(a) and the rejection of claim 20 under 35 USC 103(a) as being unpatentable over Walt(a), Seul and Chang are traversed.

Contrary to the assertion by the Examiner , Walt(a) does not teach coating a substrate with a composition including a population of biological probe modified microspheres immobilized in a coating containing a gelling agent or a precursor to a gelling agent. In Walt(a), none of the film forming polymers – Nafion, poly HEMA, and polyethylene glycol would undergo sol-gel transition as gelatin does without solvent evaporation or chemical crosslinking. It has been shown that a solvent evaporation process using polyvinyl alcohol would cause the microspheres to cluster, thus creating an unusable array. In Walt(a), the clustering problem is solved by precreating microwells on the surface of the substrate and allowing the microspheres to be immobilized in the microwells. In the claimed invention, a sol-gel transition process immobilizes the microspheres, thus eliminating the cost and complexity of modifying the substrate surface first to produce microwells. Walt(a) clearly states at page 22, lines 9-22 that the surface contains wells and the microspheres are settled in the wells before the solvent is evaporated. Immobilization is archived by settling the microspheres in the wells prior to evaporation of the solvent and not by a sol-gel transition in the medium. The microspheres disclosed in Walt(a) may be further fixed in place by using a film-forming polymer. The material Nafion is a film-forming fluoropolymer that is unsoluble in water. It is not a gelling agent as stated by the Examiner. Clearly the claims in the application are novel and nonobvious over Walt(a).

The reference to Walt(a), page 40, lines 1-15 is not to whole frame imaging using bright field illumination. There is no reference in this passage to

bright filed imaging. Rather, specific samples are identified by exciting at specific wavelengths and detecting at specific wavelengths. Thus, Figs. 8A, 8B and 8C and Figs. 9A and 9B illustrate identification of the chemicals disclosed. Clearly, claims 21-25 are novel and nonobvious over the cited disclosure in Walt(a).

The further references Walt(b), Seul and Chang add little to the disclosure of Walt(a), to negative novelty and nonobviousness in the claimed invention. Thus, Seul, par. 18 discloses the use of external electrical fields. There is no such feature needed in the present claims. Walt(b) discloses hollow microspheres. This feature is not needed in the claimed invention. Lastly, Chang discloses use of magnetic particles which are not used in the present invention. Thus, all three references teach away from the present invention and are not properly combined either singly or in combination with Walt(a).

Clearly, the claims in the case, define invention and novelty over the cited references and are deemed allowable.

Speedy allowance of this application is therefore solicited.

Respectfully submitted,

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